

Application No. 09/767,463

Request For Continuing Examination, Response, and Interview Request

Docket No. 7227-253

REMARKS

In an advisory action mailed November 14, 2003, the Examiner remarked:

Applicant's remarks filed on or about October 24th 2003, pages 2-4, again traversing Claims 9-16 and 25 are found not to be persuasive. Applicant fails to recognize the scope of the claim when judged in view of at least Swarup (US 5,929,729) hereinafter '729. The '729 teaches each element of Claims 9-12, 14-16 and 25. Elements 210 and 190 are striplines and part of the stripline coupling and transmission architecture.

The striplines include parallel striplines, microstrip lines and coplanar striplines which are separated by a dielectric slab of uniform thickness and they are commonly used in microwave circuits.

The Examiner attaches the copies of the different configurations of striplines used in microwave circuit world (Cf. *Microwave Circuit Analysis And Amplifier Design* by Dr. Samuel Y. Liao, 1987 Prentice-Hall Inc, pages 197 & 198). This reference clearly defines the stripline transmission lines.

The dependent claims continue to be rejected as stated in Paper No. 8, filed on or about July 18th 2003.

A copy of the signed IDS, filed on or about July 18th 2003 (Paper No. 9) is also attached. Furthermore, the Patent Office saith not.

The applicant and the undersigned respectfully submit that there may be a miscommunication between the Examiner and applicant concerning the interpretation and scope of the prior art and/or pending claims. Accordingly, pursuant to MPEP § 713, the undersigned hereby respectfully requests an interview with the Examiner prior to the first Office Action in this continuing application. The undersigned would welcome a call from the Examiner to set up a convenient time for this interview. The undersigned notes that, in accordance with MPEP § 713.02, it is proper and customary for the Examiner to grant an interview prior to the first Office Action in a continuing application. See MPEP § 713.02 and 37 CFR 1.133(a).

In any event, it is hereby respectfully requested that the Examiner reconsider his positions with respect to the '729 patent's teachings of transmission line couplers. Applicant believes that a number of arguments presented in response to the Examiner's July 22, 2003, Office Action, have not been fully addressed. These arguments include, among others, at least the following:

1. What Swarup teaches is lumped elements within a multi-layer "stripline" architecture.
2. The lumped elements within Swarup's a multi-layer "stripline" architecture are not stripline transmission couplers.

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3. The lumped elements in Swarup are different from those disclosed in the present application, and can be shown to be different because, among other things, Swarup's elements have different physical and mathematical properties than the stripline transmission couplers of the present application. These differences can be further explained by the applicant during the requested interview, and further explanatory information can be found in the Levy, Cohn, and Tresselt references cited on applicant's January 23, 2001 Information Disclosure Statement.

Accordingly, the Examiner's rejection is again traversed and (together with some clarifying modifications) the substance of applicant's arguments with respect to the rejections presented in the Examiner's July 22, 2003 are repeated below.

In the Examiner's July 22, 2003, Office Action, the Examiner stated:

3. Claims 9-12, 14-16 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Swarup (US 5,929,729) hereinafter '729.  
As applied to claim 9, the '729 teaches a method of making stripline circuit structure, comprising:  
• manufacturing a plurality of substrate layers (Cf Fig. 6B, elements 192, 204, 208, 212);  
• etching at least five metal layers (Cf. Fig. 6B, elements 202, 198, 194, 190, 206) disposed on several substrate layers (Cf. Fig. 6B, elements 192, 204, 1208, 212); wherein second metal layer (element 210) is part of transmission line coupler and sandwiched between first metal layer (element 214) and 3rd metal one (element 206); wherein 4th metal layer (element 190) is part of transmission line coupler and sandwiched between 3rd metal layer (element 206) and 5th metal one (element 194);  
• connecting via hole (element 160) all the 1st, 3rd, 5th layers of groundplane (elements 214, 206 & 194);  
• connecting via hole (Cf. Fig. 6B, elements 160; column 11, lines 62-65) the coupler segment disposed on second metal layer (element 210) to the coupler segment disposed on 4th metal layer (element 160) forming transmission line structure.

The Examiner, in his comments, asserts that elements 210 and 190 of Swarup are each a part of the transmission line coupler as recited in claim 9. The undersigned and applicant believe that this is not correct. As understood by the applicant, the '729 patent does not teach or suggest that elements 210 and 190 are segments of, or operate as, a transmission line coupler as recited in claim 9 of the present application.

What Swarup teaches is lumped elements within a multi-layer "stripline" architecture. These lumped elements are in a stripline architecture because they are located between a top and bottom groundplane. That these lumped elements are in a stripline architecture does not make

them part of a stripline transmission line coupler. The mathematics that govern the distributed elements in Swarup are completely different from those that govern the distributed transmission line couplers claimed in the present invention. In short, Swarup's teaching of lumped elements in a stripline architecture does not disclose or suggest the claimed stripline transmission line coupler.

The fact that element 190 is not part of a stripline transmission line coupler is made clear by the '729 patent itself. What the '729 patent states is that element 190 is a "signal carrying metal layer 190, in which the printed lumped elements are formed..." ('729 col. 11, l. 52). This disclosure (as well as the more complete disclosure found at col. 11 line 39 through col. 12 line 22 of the '729 patent) does not teach "part of a segment of said transmission line coupler" as recited in claim 9 of the present application. The '729 patent's disclosure is understood as teaching and disclosing much less – i.e., that the function of element 190 is merely signal carrying. Transmission line signal coupling as part of a transmission coupler is not taught or suggested by the disclosure of element 190. Accordingly, applicant respectfully disagrees with the Examiner's assertion that element 190 of Swarup functions as part of a stripline transmission line coupler.

The '729 patent further states that element 210 is one of "two elemental metal layers 210 ..." ("729, col. 11, l. 67-col. 12, l. 1) and that the purpose of element 210 "is to provide additional circuit elements outside the plane of the signal carrying layer 190. In the example of FIG. 6B, additional capacitors are printed and etched into the element layers 198 and 210. These capacitors are connected in parallel with the interdigital capacitors 38, 40, 46, 48 formed in the signal carrying layer 190 to provide additional capacitance in a smaller surface area. These capacitors in the elemental layers 198, 210 are connected to the capacitors in the signal carrying layer 190 using plated through via holes, as shown."

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Similar to the disclosure for element 190, the disclosure of element 210 is not a teaching of “part of a segment of said transmission line coupler” as recited in claim 9 of the present application. The ‘729 patent’s disclosure is understood as saying much less – i.e., that the function of element 210 is merely as a layer in which circuit elements, such as capacitors, may be formed (see also, ‘729 patent, col. 11 line 39 – col. 12, line 22).

If the Examiner maintains his view that elements 190 and 210 are part of a transmission line coupler (in spite of the fact that the ‘729 patent does not state or suggest that they operates as such ), the undersigned respectfully requests that the Examiner provide objective evidence of this function and cite to specific disclosure in the ‘729 patent showing that these elements are part of a transmission line coupler. It is respectfully submitted that the evidence cited to date (including the “Chapter 6 - Microwave Stripline and Stripline-Type Amplifier Design” reference provided in the November 14, 2003, Advisory Action), does not recite any disclosure about elements 190 and 210 having the structure of a transmission line coupler, or operation as a transmission line coupler.

Because the ‘729 patent does not teach or suggest that either element 190 or element 210 of the ‘729 patent is part of a transmission line coupler, the examiner’s rejection of claim 9 as anticipated under 35 USC 102(e) is respectfully traversed. The undersigned respectfully request that the Examiner withdraw his rejection of claim 9 and allow the claim.

Claims 10-16 and 25 each depend, directly or indirectly, from claim 9 and are patentable over Swarup for at least the reasons stated with respect to claim 9.

#### CONCLUSION

Applicant has requested an interview with the Examiner prior to a first Office Action in this continuing application. In accordance with MPEP § 713.02, it is proper and customary for the Examiner to grant such an interview. See MPEP § 713.02 and 37 CFR 1.133(a). The

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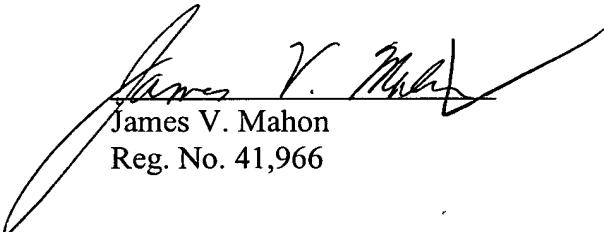
undersigned would appreciate further communication from the Examiner to establish a convenient date for this interview.

All of the Examiner's rejections have been traversed, claims 9-16 and 25 are now pending and believed to be in condition for allowance. Applicant respectfully requests that the Examiner withdraw his rejection and that the pending claims be allowed.

Please apply any credits or excess charges to our deposit account number 50-0521.

Respectfully submitted,

Date: January 22, 2004

  
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